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ABSTRACT

A 2-year feasibility study at the University of Saskatchewan involved the off-campus delivery of introductory courses in English, history, and psychology via satellite television, the telephone, and on-site facilitators. Students were expected to prepare for the televised lectures by reading and reflecting on specific topics identified in specially prepared course guides. Mailed questionnaires were used to evaluate the courses. The study reported the following strengths attributed to the televised courses: (1) the televised courses have increased access to university education in rural Saskatchewan; (2) it appears that the mode of delivery has the potential to provide a viable alternative to on-campus university study for both young rural people and part-time adult students; (3) the TV lecturers were excellent teachers and were considered by the students to be a major asset in this delivery mode; and (4) the students were given clear instructions as to what to expect from the course by the instructors, the course guide, and the facilitators. The following limitations were reported: (1) students in all three courses felt that the feedback about their performance in assignments could be improved; (2) some students expressed concern about some subject matter and organizational inconsistencies that they found irritating and time-consuming; (3) several sites experienced persistent problems with television reception; and (4) despite the overall positive reaction to he televised courses, some students said they thought the could learn better with a face-to-face instructor. (Appendices include 21 data tables and the questionnaires.) (CML)

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TELEVISED COURSES AT THE UNIVERSITY OF SASKATCHEWAN: SOMETHING OLD, SOMETHING NEW

July, 1989

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Division of Extension and Community Relations
The University of Saskatchewan
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Background of the Study

Launching of the Experiment: 1987-88

In the fall of 1987, the Division of Extension and Community Relations, which is responsible for the off-campus delivery of both credit and non-credit courses, decided to invest in an experiment to deliver two introductory courses, English 110.6 (Literature and Composition) and History 112.6 (Historic Foundations of Modern Civilization) to 13 sites in the province via satellite television. In September 1988, Psychology 110.6 (General Psychology) was added and the number of sites was increased to 25. In all three cases, satellite television, the telephone, and on-site facilitators were used to bridge the distance between the campus-based instructors and the off-campus students. Students were expected to prepare for the televised lectures by reading and reflecting on specific topics identified in specially prepared course guides. This mode of teaching and learning at a distance added another dimension to the University of Saskatchewan's tradition of extending university resources beyond the Saskatoon campus.

University courses offered through distance education are designed to meet the needs of people who wish to acquire a university degree but for whom a move to the Saskatoon campus is a hardship, if not an impossibility. It allows students to take university courses without travelling long distances away from their home communities. Prior to the introduction of televised instruction, off-campus students could attend classes taught by travelling instructors at 18 locations in the province, or they could enrol in independent study courses, which are essentially print-based courses sometimes supplemented by audio and/or video tapes. Under the televised instruction model, the use of television technology allows all the participants to see and hear television presentations made by University faculty members who are noted for both their scholarship as well as their dynamic teaching styles. The one-way video and two-way audio system allows the students to interact on-air with the instructors. The employment of local facilitators (known as "proctors" or "tutors" according to their functions) provides additional assistance to the students by helping them identify the contexts for understanding the new information.

The 1987-88 pilot year included courses taught by Professor Ron Marken of the English department and Professor Michael Hayden of the History department. Professor Hayden was assisted by Richard Gorrie, a graduate student who was also a

professional actor. Mr. Gorrie scripted, produced and acted in a series of dramatic vignettes which were incorporated into the lectures. The Extension Division negotiated for the the release of both professors to work on the planning and presentation of their televised lectures. A similar arrangement was made with the Psychology department in 1988-89 to obtain the services of Professors Art Clark and Ko Vandonselaar. The delivery of the experimental courses was facilitated by the assistance of the Saskatchewan Regional Colleges and SIAST branch campuses. These agencies provided the television viewing facilities and the personnel to advertise the courses, and identify local problems, whether human, logistical or technical. Problems were reported to the Division's Office of Part-Time Degree Studies, which provided the administrative infrastructure for the production and distribution of the print materials, the maintenance of a record system, and the hiring of local facilitators. In many communities, it was the Regional College university program coordinator who alerted the Extension Division about potential candidates for the role of local facilitator.

The live transmission of the lectures was made possible by the technical support of the Division of Audio Visual Services, which had spearheaded the University's participation in a series of experiments with satellite television. In 1986, a "seat sale" offered by Telesat, the common carrier for space communications in Canada, had resulted in 70 hours of experimental programming on the satellite Anik C at a discount of 75%. These earlier experiments had consisted of non-credit one-time events such as crop information for farmers and professional development for veterinarians and members of the Federated Co-operatives. In the fall of 1986, a group of "small users", including the University of Saskatchewan, officially formed a consortium with the corporate name of STELLA (Saskatchewan Tele-Learning Association Inc.). Bob Brack, Director of the Division of Extension and Community Relations and the STELLA board chairman at the time, together with Danielle Fortosky, Director of the Division of Audio Visual Services, entered into negotiation with Telesat and the Federal Department of Communications. Telesat offered STELLA 100 hours of channel service at 25% of the normal tariffed rate ($325.00/hour) from September 1,1986 to August 31, 1987. In 1988-89, STELLA joined a consortium of satellite networks in North America to buy satellite time from the Hughes Television Network at a reduced bulk rate.

The success of these programs and the continued support of the Telesat seat sale combined to make the medium of satellite television an attractive alternative to the travelling instructor mode. This traditional approach has become more difficult to

implement in recent years because of the dwindling number of qualified faculty who are willing or available to travel long distances. The small and widely dispersed population of Saskatchewan also makes it financially unfeasible to offer face-to-face courses in small rural communities. The use of satellite television would make university courses available to any site with the facilities to receive the signal. English 110.6 and History 112.6 were delivered to 13 sites in 1987-88, including Prince Albert, Yorkton, North Battleford, Meadow Lake, Swift Current, Estevan, Weyburn, Tisdale, La Ronge, Moose Jaw, Kndersley, Lloydminster, and Saskatoon. In 1988-89, the STELLA network added Hudson Bay, Wynyard, Rosetown, Maple Creek, Assiniboia, Whitewood, Buffalo Narrows, Creighton, St. Walburg, Nipawin, Melfort, Unity, Biggar, Watrous, Davidson, Canora, Indian Head and Shaunavon.

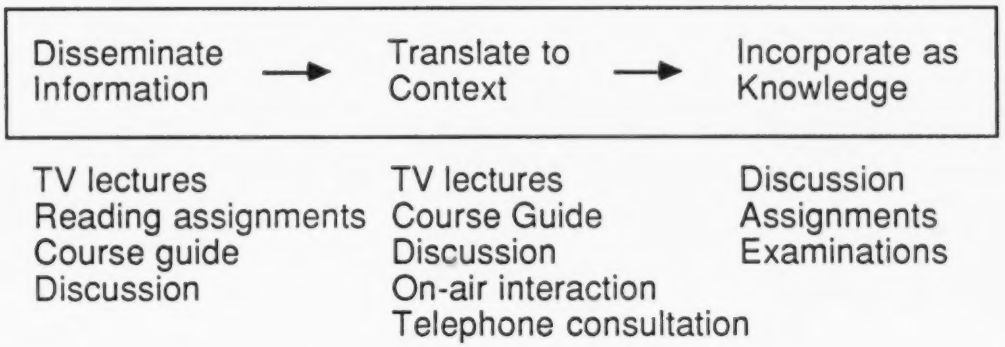
The Teaching/Learning Model

Given that the Division's previous experience with distance education had been focused on print-based courses supplemented by audio and/or video tapes, the instructional designers assigned to the project had to re-think the teaching/learning process to incorporate television broadcasting as a major channel of information transfer. Because of the relatively high cost of satellite television, the designers were constrained by the amount of time that could be devoted to the televised lectures. They were also aware that although different media can present the same information equally effectively, they do differ in their ability to encourage students to translate and apply the information (Wong, 1987). The course content was therefore presented to the students via a combination of televised lectures and a variety of print material, including several textbooks and a course guide. The instructors had complete control over the content of the televised lectures and also chose the supporting text books.

The students were assisted in their search for understanding by the instructor, the local facilitator, and their learning peers. This assistance was provided via the televised lectures, the course guide, the local discussions, the on-air interaction with the instructor, and telephone consultations with the instructor. The students' progress in understanding and integrating the information was monitored via their participation in the discussion groups and their input into written assignments and examinations. The weekly format consisted of a 15 minute orientation and review, a 60 minute live television presentation, a 30 minute off-air discussion led by a local facilitator, a 30 minute on-air discussion with the instructor, and a 15 minute wrap-up.

In the pilot year, 377 students gathered weekly at the designated sites to view the televised lectures and to participate in the discussions. Each site was given sets of pre-labelled videocassettes to tape the lectures. These back-up tapes were housed in the Regional College offices for students who missed a lecture or wished to review a lecture. The following figure illustrates the teaching/learning modes that were incorporated into the design.

Teaching/Learning Modes



The decision to recruit and employ community-based tutors was based on the assumptions that a facilitator could encourage students to go beyond the passive reception of new information, and that strong student support is essential to high completion rates. The latter has been demonstrated by distance teaching institutions such as the Open University in the United Kingdom and Athabasca University in Canada (Kaye & Rumble, 1981; Mugridge and Kaufman, 1986). The University of Saskatchewan facilitators, however, differed from the tutors in these two institutions in that they were not expected to be content experts; their function was to encourage the students and help them find the contexts for understanding and applying the new information.

All the facilitators possessed at least a B.A. or a B.Ed.; some had M.A.s. Because of Saskatchewan's small population and the project's intent to deliver the classes to small rural communities, the administrators experienced difficulty in recruiting enough local "tutors" with a master degree, the level required to mark assignments. A compromise was achieved in the decision to hire "proctors" who could lead the local

discussions but would not mark assignments. In the latter case, the assignments were sent to the main campus to be marked by the instructor or a campus-based tutor. Both tutors and proctors were invited to the campus before the classes began to participate in a one-day workshop to orient them to the design of the project, their expected roles and functions, administrative procedures, and the studio facilities where the lectures were to be broadcast.

A quota established by the College of Arts and Science in 1987-88 (and repeated in 1988-89) resulted in almost 500 qualified students being turned away. These students were encouraged by the Saskatchewan Department of Education to enrol in off-campus classes offered via the Regional Colleges. The Minister of Education also requested that the University extend its off-campus registration deadline from mid-August to mid-September. While this extension increased the number of students participating in the televised courses, it also created problems for the Part-Time Degree Studies Office in terms of its delivery of print materials to the participating students and recruitment of local facilitators.

Evaluation of English 110.6 and History 112.6

Evaluation of these experimental courses was conducted over three phases: (1) a mid-term survey of all the students and local assistants via a mailed questionnaire; (2) a telephone interview of a 25 percent random sample of the students; and (3) a comparison of the final grades of students in the televised courses and those in regular on-campus courses. The first phase investigated the students' perception of a number of variables which are considered important for the successful implementation of the teaching/learning model. For example, the students were asked to rate the importance of the course guide, the televised lectures, and the local facilitators in helping them understand the course content. The purpose of the telephone interview was to obtain more demographic information about the students and to probe more intensively about their reaction to the various modes of learning incorporated into the design of the courses.

The experiment, on the whole, received very positive ratings from the students and the communities involved (Wong, 1988). Much of the success could be attributed to the fact that experienced and charismatic teachers at the University were recruited to be the television lecturers, and they were ably assisted by some enthusiastic local facilitators.

No significant differences were found between the final grades of students who had participated in the televised classes and those who were enrolled in regular face-to-face classes. The following are some findings which are specifically related to the use of television:

Interactive television helps to create a feeling of belonging or affiliation among students who had previously felt detached or isolated. Positive feelings were expressed by both students who had previously taken off-campus evening classes and those who had taken independent study courses. Many in the former group felt the TV lecturers were the best professors they have ever had, and many in the latter group were elated to hear and see their instructor talking to them. For example, one English student commented, "*The class is fortunate to have Professor Marken. He is the best professor I have ever had. He makes this course interesting and enjoyable to attend.*" Another History student said," *I like the TV presentations the best and enjoyed them. I didn't fully understand the material in the text books---it's more understandable when Professor Hayden makes the presentation. TV makes me feel like I'm on campus.*"

The survey also found that although the television presentations were generally highly rated, they were more highly rated by students living in communities with no previous access to University of Saskatchewan classes than those who had been exposed to face-to-face classes. There were some students who stated in the phase one survey that they felt strongly they can learn better in a face-to-face situation, but most of them conceded in the telephone interview 4 months later that the model works and that it may be the next best thing to having a local instructor. A student from Prince Albert commented, "*I feel the course was quite meaningful. The pictures and dramatizations added color and understanding. It would have been better to have the professor here in person, but this is the next best thing.*"

Students require instruction in how to watch and participate in live telecourses. Feedback from the phase one evaluation indicated that students felt intimidated by the prospect of being heard on air by the whole province. Some were discouraged by being beaten to the telephone by another group. Students in large sections (e.g. Prince Albert) felt constrained by the telephone equipment. Most of the students relied on the local facilitators to phone in their questions. In the second term, the English lecturer adjusted his interaction strategy and used targeted questions directed to specific sites; students reported in the phase two telephone survey that this worked much better. This

strategy was later adopted by the History and Psychology lecturers with the similar success.

The survey also discovered that some students experienced frustration with the fast pace of the televised lectures, partly because of inadequate study skills such as listening for main ideas and taking proper notes. In the second year, the Division designers, in cooperation with the Student Services unit, produced a study skills package using interactive video and a print manual. A province-wide workshop was held two weeks before classes began and all off-campus students were invited to participate. "Learning to Learn" has since been sold to community colleges and school boards across Canada.

Local facilitators need to be oriented to the philosophy and rationale of televised courses as well as receive practical instruction in facilitating local study groups. Initially, the local facilitators were recruited more for their academic qualifications than for their ability to facilitate a discussion group. Because the Extension Division had to lay off a number of sessional lecturers in order to implement the pilot courses, these "veterans" were given first priority in applying for the facilitator's position. Feedback from the students revealed that a couple of these veterans had difficulty adjusting to the downgrading of their status and were either blatantly or subtly putting down the televised lectures as inferior to face-to-face lectures. In contrast, first-time facilitators who had no previous experience in teaching university courses and had attended our orientation workshop turned out to be excellent facilitators, who did not compete with the on-camera lecturer but complemented his message with their individual perspectives. Many of them expressed personal satisfaction in their contribution to the project in spite of the amount of time they need to commmit to the preparation and facilitation:

> *"I am fulfilling my function as proctor exactly in the way that I anticipated when I accepted the position...While they are reading, thinking and writing about a piece of literature, the students use me to check their perceptions. Although I am not able to answer their questions with any real authority, the talking helps. We can bounce ideas off each other and together, are able to come up with some very legitimate interpretations (confirmed by the instructor). My group, and I expect it is typical, is insecure about English and particularly writing. This group has needed a great deal of support,*

encouragement and my time...I must say I've enjoyed every second of it." (English proctor)

"A very positive experience...participating in what is a very good idea. The students appreciate the fact that they are getting first class instruction or the same level as students in Saskatoon. They do not get the feeling that they are in some way second class students. I personally find the lectures interesting and informative...Michael (the instructor) lectures very well. He is interesting, well organized, and he gets his material across very well...The reading, preparation and thought that must go into each week's presentation is very considerable...Unfortunately, for me, I must take this time away from my family." (History proctor)

Recommendations for Year Two

Given the positive feedback obtained about the pilot year, it was recommended that English 110.6 and History 112.6 be continued for a second year with the following provisos:

Enhance the dissemination of the course content by:
* increasing the time devoted to the TV lectures; or
* making the back-up tapes available to the students on a more flexible schedule; and
* developing a course guide with more structured information for independent study.

Assist and encourage the student's search for comprehension and integration of the course content by:
* providing a proctor for every site with six or more students;
* providing students at non-proctored sites with the opportunity to view and/or hear the studio discussion led by the instructor.

Enhance the contribution of the tutors/proctors to the learning process by:
* selecting tutors and proctors who demonstrate a potential for being good facilitators rather than being content experts;
* providing tutors and proctors with an orientation session which clearly identifies their roles and responsibilities;

* initiating regular tele-conferences between the tutors/proctors and the instructors to get feedback about the students' progress, the facilitation of the discussions, and the marking of assignments.

Enhance the learning environment by:

* limiting the class size to a maximum of 25 students;
* providing every STELLA site with large TV screens and Darome-type tele-conferencing equipment.

Enhance support services to the students by:

* increasing the off-campus library collection so that students can have better access to reference materials for their written assignments;
* providing independent learning materials which would assist the students in developing their study skills, particularly essay wrting skills.
* establishing "telephone tree" in cooperation with the Regional College staff to alert students of class changes;
* making available senior adminstration staff who could meet with the off-campus students and listen to their concerns.

Ensure efficient program planning in the long term by:

* consulting with Regional Colleges and SIAST campuses about the optimal times for scheduling the TV presenatation;
* exploring alternative modes of delivery to large communities where the number of full-time students increases the potential for a schedule conflict with the TV presentations.
* incorporating into the planning process a "time off" period for evaluation, reflection, design modification and feedback, i.e. new courses should be added only every second year to allow Extension Division staff to do the above.

Year Two: Something Old, Something New

Demographic Characteristics of the Participants

Like the off-campus students in the pilot year, the English and History students in the second year showed some similarities and differences in terms of their demographic characteristics. There are more females than males; 51.2% and 77.0% respectively of the English and History students are female. About one-third of both groups are married. About half of the English students are age 22 or younger, but only 31% of the History students belong to this age range. One-quarter of the English students have full-time jobs compared to 37.1% of the History students. (see Tables 1a and 1b)

Forty-five percent of the English students had matriculated from high school the previous year compared to 26.4% of the History students. Almost half of the History students had matriculated from high school more than ten years ago compared to 31.1% of the English students. Seventy-two percent of the History students were "unclassified" students compared to 47.1% of the English students. Twenty-six percent of the English students and 49.2% of the History students were admitted into university under the "special admission" category. Over half of the English students (54.5%) were full-time students compared to 37.9% of the History students. (see Tables 2a and 2b).

On the whole, the English students tend to approximate the profile of the traditional university student while the History students tend to share the characteristics of the part-time adult student. Feedback from the local proctors and tutors indicate that there are more of the younger traditional students in the larger centers of Prince Albert, Yorkton and North Battleford, while the smaller communities tend to have more of the adult students. For example, all of the History students in Kindersley are women in their 30s and 40s except for one male just out of grade 12. Likewise, in St. Walburg, five out of the six History participants are female teachers. From the proctors' perspective, the homogeneity and maturity of the students had a positive impact on the success of their local discussion groups.

The Psychology students tend to be more like the History students than the English students in terms of their age, sex, marital status and student status. About

three quarters of the students are female and just over half are married. Thirty-eight percent are age 22 or younger; about half are over 30 years of age. Sixty-two percent are part-time students. Thirty-four percent and 33% respectively have full-time and part-time jobs outside the home. Seventy-two percent of the students travel 10 km. or less to a viewing site. Like the English students, about 85% of the students were first admitted to the University of Saskatchewan in 1988 and less than one-third were admitted as "special admission" cases. Like the History students, about 26% had matriculated from high school the previous year and a majority (60%) are "unclassified" students (see Tables 1c and 2c).

English 110.6 and History 112.6: Year Two

Introduction.

English 110.6 and History 112.6 were continued during the 1988-89 academic year with enrollments of 237 and 131 respectively. While the English lectures were transmitted "live" like the previous year, the lecture portion of History was "canned." It had been the intention of the Extension Division administrators to tape the lectures of the first year, then edit and distribute them as videocassetes for the next few years, leaving only the interactive period between the students and the instructors "live." The high cost of developing and maintaining the courses necessitates the development portion to be amortized over 4 to 5 years. However, the interpretive nature of the English course and the teaching style of the English instructor did not make "canning" a feasible option. Both courses followed the same format as in the pilot year: a 15 minute orientation and review, a 60 minute lecture, a 30 minute off-air discussion led by a local facilitator, a 30 minute on-air discussion with the instructor, and a 15 minute wrap-up. While Professor Marken lectured in front of a studio class every Wednesday evening, Professor Hayden's edited lectures were transmitted by satellite to the 25 receiving sites every Tuesday evening. Professor Hayden conducted a live on-air discussion with the students after the discussion break.

Several of the recommendations made as a result of the evaluation of the pilot year were implemented. New editions of the course guide were produced, giving the students more detailed information about the weekly topics and additional ideas on how to prepare for their reading and writing. An attempt was made to recruit proctors

and tutors for sites with six or more students. Sites with fewer than six students still had to form their own study groups, but the Division paid a local Regional College staff member to act as a "course assistant" to facilitate administrative functions such as receiving and distributing University material and invigilating exams. New sections of a local group were started once the student enrollment reached 25. Every STELLA site was installed with new 28 inch TV monitors. Regular teleconference meetings between the TV instructors and the local facilitators were set up during the orientation workshop for proctors and tutors. A study skills package was developed for off-campus students to assist them in acquiring skills such as notetaking and essay writing..A librarian was designated to look after the needs of off-campus students. Discussion with the SIAST Woodland campus (Prince Albert) resulted in the sanction of an alternative English 110 section on Friday mornings in addition to the two sections on Wednesday evenings.

Feedback from the Students

Questionnaires were mailed to the off-campus English and History students at the end of the second term to investigate the students' perceptions of a number of variables which are considered important for the successful implementation of the teaching/learning model (see Appendix B). Each variable was presented on a five point scale with indicators ranging from 1 (lowest) to 5 (highest). For example, the students were asked to rate the TV presentations in terms of how much they helped the students learn the content of the course. They were also given the opportunity to provide additional comments about their responses. The return rate of this survey was 46.2% for English and 50.4% for History.

Tables 3a and 3b summarize the students' mean ratings of a variety of variables. Both the English and History courses received high ratings in terms of the TV presentations (4.27 and 4.21 respectively). As in the pilot year, students were high in their praises of Professors Marken and Hayden. The English students described Professor Marken's lectures as "*excellent... very clear... entertaining... enjoyable... a more effective, stimulating and supportive way to learn than by correspondence.*" Likewise, the History students perceived Professor Hayden's lectures to be "*interesting...informative...excellent... intelligently arranged and produced.*" Some History students found the fast pace of the lectures and the amount of material covered

to be somewhat overwhelming; others commented positively about the dramatic vignettes.

The students were generally satisfied with the quality of the TV picture and sound as well as the facilities where the lectures were viewed and discussed. There were a few sites, like Rosetown, North Battleford, Nipiwin and Prince Albert, where the quality of the transmission was unsatisfactory. In Rosetown, a maladjustment of the satellite dish resulted in the English students receiving the horse races instead of English 110.6 during the first term. In Prince Albert, one cable was split between two classrooms resulting in some audio visual problems.

The proctors and tutors received moderately high ratings in terms of their helpfulness (3.65 for English and 3.25 for History). On the other hand, the markers' written comments were considered just adequate or not very adequate (3.02 for English and 2.95 for History). The students commented that they were often marked down for inappropriate analysis or ungrammatical writing, but were not given any guidance on how to improve their assignments. Not being able to meet face-to-face with their markers was a source of frustration for some students. Within the English course, some students had their assignments marked by their local tutors while others mailed their assignments in to the Saskatoon campus. The latter group usually got their assignments back later and consequently felt they were in a "disadvantaged" section.

The students thought the textbooks, the course guide and the examinations were appropriate. The History students gave their course guide a higher rating than that given in the pilot year, perhaps reflecting approval of the greater detail given to the description of the weekly readings and lectures in the second edition. The English students commented positively on the notes in their course guide which gave them specific strategies on how to write essays and to study poetry. Both the English and History students thought that the time between assignments could be more appropriately spaced and the return time could be speeded up. The History students were asked to rate their main reference texts as well as those used for their assignments; Malthus was consistently identified as a difficult text.

Although both the English and History students thought the courses were somewhat difficulty (2.58 and 2.27 respectively), they rated the courses as good or very good (3.79 for English and 3.65 for History). Many English students credited the success

of the course to Professor Marken's ability to motivate students via the medium of television and his skill in presenting the subject matter. For example:

"Overall, this class was the one I truly enjoyed. I didn't think I'd enjoy poetry, but find I am now totally fascinated by it and gain a great deal of joy from reading it." (student in North Battleford)

"The class is excellent for someone like me who is unable to attend classes in Saskatoon. Professor Marken always gave excellent and interesting lectures which kept our interest going ... STELLA is a great way to learn. High schools should be publicizing the program to students so that they are aware of the opportunity for future classes following grade 12." (student in Watrous)

The History students found the course content to be interesting and well-presented, but many felt that it could be better if the pace was more relaxed. Many of these students were part-time adult students dealing with multiple responsibilities of work and home. One student commented,"*I love History, it's much more interesting now than when I went to school. At times I found it difficult as I have two jobs and took two classes, but it was worth it. I feel I learned a great deal. The guests (in the dramatic vignettes) were a delightful addition. The university was completely accessible to this area. Don't know why I didn't take it sooner.*" (student in Swift Current)

When asked to compare the televised courses to other university courses they have taken in regular classes, the students rated both English 110 and History 112 as equivalent or somewhat better (3.48 and 3.42 respectively). Some students commented that the courses involved more work than any other that they have taken, but the superior teaching skills of the TV instructors kept them motivated. One student at a non-proctored site commented,"*Professor Marken comes across very well on the screen. He added a lively, upbeat feeling to the class which made me feel like part of the class group despite being scattered across the province.*" Some students credited the course guides as an advantage in that they gave students an idea of what to expect. The back-up tapes were also cited as an advantage that regular classes do not provide. Students who had been sick or had to miss a lecture because of work or family responsibilities found them to be very useful. The "weaknesses" of the system included not having enough opportunity for spontaneous interaction, poor audio-visual

reception at some sites on some occasions, and loneliness on the part of students at sites with one or two people and no proctor to lead a discussion.

Finally, the students were asked to suggest ways in which the course could be enhanced to make it a more meaningful experience for them. Sites that experienced technical difficulties with the satellite transmission (e.g. Rosetown, North Battleford, Nipiwin, Prince Albert) requested that the problems be corrected. Students at sites with one or two students and no proctor (e.g. La Ronge, Whitewood, Biggar) wanted access to the discussion session in the studio. Students who were also enrolled in the Psychology class and had been visited by Professor Vandonselaar suggested that the English and History professors could visit their off-campus students too. Students in both courses asked for more detailed comments about their assignments; they would appreciate getting more feedback about the "*rightness or wrongness of (their) analysis.*" They also requested that the camera should stay on the board longer to allow them to copy the lecturers' notes. Some students suggested that the professors should mark one assignment of each satellite student so they could get some feedback from the lecturer, rather than from a tutor.

Final Grades

The final grade status of the English and History students are shown in Tables 4a and 4b. Seventy percent of the English students and 67.4% of the History students had achieved a passing grade. About one-tenth of the students in both courses had been absent from the final exam. The withdrawal rate among the English students was 12.9% ; 13.6% of the History students also withdrew from their course. The percentage of English students who withdrew or were absent is higher than that of the pilot year (7% and 5.7% respectively). In the History course, the absent rate is comparable to that of the pilot year but the withdrawal rate is slightly lower.

The students' final grades were correlated with selected student characteristics, including sex, age group, marital status, work status, admission status, college status, and student status (see Tables 8a and 8b). Among the English students, a significant difference was found between groups in relation to two variables: age group and marital status. Older students achieved significantly higher grades than younger students ($p<0.03$). An analysis using the Student-Neuman-Keuls procedure identified a significant difference between the 41 and over age group (70.58) and the 23 to 30 age

group (60.07), with the latter having the largest variance among the four age groups. Likewise, married students performed significantly better than the single students ($p<0.05$).

Among the History students, significant differences were found between groups in relation to six variables: sex, age group, marital status, admission status, college status and student status. The mean final grade for the female students was 72.02 compared to 64.07 for male students; this was significant at the $p<0.01$ level. Married students performed significantly better than single students ($p<0.00$), so did older students compared to younger students ($p<0.00$). A Student-Neuman-Keuls analysis showed that those age 22 and younger achieved significantly lower grades (60.68) than all three other age groups (71.43, 75.13, 77.25 respectively). Part-time students performed better than full-time students ($p<0.00$), so did unclassified students compared to Arts and Science students($p<0.01$). Students who were admitted as "special admission" had a mean final grade of 75.31 compared to a mean of 65.00 achieved by those who were "fully admitted" ($p<0.00$).

Psychology 110.6: Something New

Introduction

Psychology 110.6: General Psychology was introduced as a third televised course in September 1988 with an enrollment of 231 students. Like English 110.6 and History 112.6, it was developed and implemented within a short time frame of six months. Unlike the English and History courses, which relied heavily on the televised lectures to transfer the subject content, the Psychology course content was embodied in a print package developed by Professor A. Clark; the television lectures presented by Professor K. Vandonselaar were designed to enrich the print portion of the course. The TV lectures were shorter in length (40 minutes compared to 60), and were intended to give the students additional examples and illustrations which surround some of the controversial issues in the field of psychology.

The Study Guide included 20 units of content following the mastery-learning approach. This approach incorporates a number of features that research on the psychology of learning and memory has shown to result in improved student

performance. The first feature is the inclusion of behavioral objectives which specify what the students should understand after completing work on a section of the course material. The course material is divided into 20 units, each of which is further divided into 4 to 7 modules. Following the objectives are the required textbook reading for each module and the supplementary reading. The readings are followed by study questions which draw the students' attention to a variety of facts, concepts and theoretical points. By answering these detailed study questions, the students would have the information to answer any exam question.

The second feature of the mastery-learning approach is that students are required to demonstrate that they have understood the information in each unit before they can go on to the next. Tests, based on information in the textbook and supplementary information in the Study Guide are written at the end of each unit. A score of 80% has to be achieved in each mastery test before the student can move on. Writing weekly mastery tests is intended to help students develop the motivation to pace their studying effectively. According to Professor Clark, it helps to reduce procrastination, which results in students "cramming" the night before a midterm or final exam. Mastery tests also help students to avoid the problem of cumulative failure. Frequently, students do poorly in later parts of a course because they had failed to master essential concepts from earlier part of the course that provided the foundation for understanding later material. Professor Clark states that research has demonstrated that the adoption of a mastery learning approach can lead to two-thirds or more of a typical group of students achieving a grade of 70% or better (the average grade in introductory psychology classes being 60% to 69%).

A third feature of the mastery-learning approach is individualized instruction. When a student has completed a mastery test, he/she meets with or telephones a tutor. The tutor scores the test immediately and provides the student with feedback about his/her performance. When inaccurate responses are given, the tutors clarify the concepts and give specific instructions about further reading. The student will then write version B of the mastery test. To facilitate student access to feedback about their performance, four part-time tutors were hired to respond to calls at selected hours seven days a week. The calls came in via two toll-free lines located in the Extension Division offices. In Prince Albert and Yorkton (one term only in the latter), qualified individuals were hired to provide feedback on-site.

Twenty-four lectures were prepared and presented by Professor Vandonselaar. A separate TV Guide was prepared listing the lecture topics and the related content in the textbook. These lectures were not intended to clarify or elaborate on the material in the Study Guide units, but were planned to be "mind stretchers" or enrichment material. About 230 students gathered every Thursday at 5 p.m. to view the "live" lectures, which Professor Vandonselaar presented in front of a small studio class. The format included a 5 minute warm-up, a 40 minute televised lecture, a 30 minute break and discussion period, and a 15 minute interactive discussion. Four long assignments based on the lecture material were required, but the lecture content was not included in the midterm and final exams. Students were expected to attend these lectures and participate in the discussions in addition to working on the Study Guide material.

Mid-term Evaluation

A mid-term survey of the students was conducted in January, 1989. The questionnaire contained questions similar to those asked in the English and History surveys, but included additional questions about contact with the TV lecturer and the weighting of the student evaluation components (see Appendix B). Table 3c shows the students' ratings of the variables related to the teaching/learning process. The students were generally satisfied with all the variables but considered the course to be somewhat difficult. The student comments that accompanied the ratings pointed to a feeling of being overwhelmed by the workload rather than a high level of difficulty within the course content. For example, the Study Guide achieved a mean rating of 3.95, but many students stated that while they felt the Study Guide was very helpful in assisting them to *learn* the content, they did not *enjoy* the process. Many students were spending between 8 to 12 hours per week on the Study Guide and mastery tests in addition to attending the lectures and discussion. Many students reported being frustrated when they could not find an answer to a question. Subsequent investigations showed that there were some inaccuracies in the Study Guide because of the change to a new edition of the textbook; corrected versions were sent out immediately but the experience had left a negative feeling among some students.

The televised lectures received a mixed reaction from the students, many of whom had expected that the lectures would help to explain difficult concepts in the Study Guide. Many students praised Professor Vandonselaar's presentations as "*very enjoyable... easily understood... informative*"; some expressed appreciation for the

opportunity to deal with a topic in depth and learn about Psychology in a different way. However, many students expressed disappointment that the lectures were not more related to the text material and the Study Guide questions. Feedback from the proctors revealed that some students stopped coming to the lectures when they learned that the content would not be included in the exams. Based on the information from the proctors and the survey, Professor Vandonselaar began to revise his lectures in the second term to achieve a balance between "mind-stretching" material and text-oriented material. One student commented,"*After Christmas the prof was on fire and really very interesting and good. I can remember the last two units real well. The prof is getting through to me.*"

The students could get assistance from three sources, the professors, the telephone tutors and the local proctors. Like English and History in the pilot year, the professors received relatively few calls (see Table 5). The telephone tutor's function is to score the students' responses on the mastery tests and give them direction about how to read and search for the correct answers. They received an average rating of 3.36, and many students commented that they found the tutors helpful and encouraging. A few students reported feeling frustrated when they could not get through to the tutor on the telephone. Feedback from these tutors showed that many students requested assistance in understanding the text material, particularly on the topics related to physiology. They perceived many of the students to be motivated and articulate, but there were some who seemed to be unprepared academically for university study. The proctors received an average rating of 3.45. Students expressed appreciation of the proctors' assistance in clarifying course expectations and procedures, but some proctors seemed to be more effective than others in facilitating discussion groups.

Four essay assignments based on the lecture content were required. They were marked by Professor Vandonselaar and a campus-based assistant. While most students found Professor Vandonselaar's comments to be constructive, helpful and encouraging, some students found the assistant marker's comments to be too general and critical without being directive. Some students pointed out that although this is not an English class, they would appreciate receiving some guidelines on organization, style and grammatical expectations. These long assignments appeared to be one of the two main reasons why students used the back-up tapes; the lectures were reviewed prior to their writing the assignments. Students also reviewed the tapes when they missed a class because of illness or job/family responsibilities.

The students were asked to rate the weighting of the mastery tests (15%) and the long assignments (20%) in terms of their relative contribution to the final grade. The mean rating was 3.42, indicating that the weighting was appropriate. However, the students' comments indicated that many felt that the mastery tests should be worth more, given the large amount of time devoted to the preparation for them. Some students who valued the long assignments for their opportunity to explore an issue and express their own opinions felt that they should be worth more; a few suggested that they should retain the same value but be decreased in number.

Like the students in English 110 and History 112, the students found Psychology 110 somewhat difficult (mean rating 2.21). Like the other students, the difficulty was to a great extent associated with workload. Some students also found the terminology and the earlier units e.g. the brain and the central nervous system, difficult to learn. The problems with some of the Study Guide questions exacerbated the students' perception of the difficulty level. As two students put it:

"(The course was) difficult in terms of time. It took up much more time than I had been led to expect, which took up a lot of family time and other commitments. Sometimes I did not have the time I needed to keep up with the studying I would have liked to have done. The material in itself was fine and I found it very interesting and informative. Only certain parts were difficult and that had to do with some of the confusion between the text and the guide material that was not there."

"I think my comment here would be that the course is very interesting and full of useful information. It is the demands made upon one's time that makes it somewhat difficult for me."

Perhaps this perception contributed to an overall rating of 3.24 for the course. This is somewhat lower than those of English (3.79) and History (3.65) but not significantly so. Among the suggestions given by the students were:

* decrease the length of the Study Guide
* correct the inappropriate items in the Study Guide and mastery tests
* relate the TV lectures more to the text material
* make the TV lecture content part of the exams

* permit the local proctors to mark the mastery tests so students can receive immediate feedback rather than wait to phone in to a tutor
* allow the non-proctored sites to participate in or listen in on other discussion groups

Some students pleaded for an alternative way to studying psychology while others expressed satisfaction with the behaviorist approach in spite of some frustrations. For example:

"I like to talk about the material I'm learning. Courses should be supplemented by extra reading or tours or research--- things to get my mind active rather than just packing in information. If I knew the course would have been this dull, I would have waited for another with a real-life instructor." (student in Prince Albert)

"The study guide and mastery tests do help in learning the material, however, it takes up too much time. Shortening the study guide will leave more time for learning and enjoying the topics, rather than rushing and cramming to complete notes." (student in Yorkton)

"Although I thoroughly enjoy working on this course, I have acquired a high load of frustration trying to keep up with the study guide and mastery tests. Such personal factors as trying to balance a home located on a farm, a half-time job and maintain community interests are part of this frustration." (student in Whitewood)

Final Grades

Sixty-two percent of the Psychology students passed the course compared to 70.3% of the English students and 67.4% of the History students. Slightly more Psychology students than English or History students were absent from the final exam (13%) or had withdrawn from the course (14.5%). Like the English and History students, some significant differences were found when the final grades were correlated with selected student characteristics. Older students, especially those age 31 and over, did significantly better than younger students ($p<0.00$); married students also achieved significantly higher grades than single students ($p<0.00$). Part-time students and specially admitted students did better than full-time students and fully admitted students ($p<0.01$ and $p<0.04$ respectively). Although working students (both full-time

and part-time) tended to do better than non-working students, the difference as not significant (see Table 8c).

Table 9 shows the class average by STELLA site. It also lists the number of students who had withdrawn and those who had been absent form the final exam, as well as the sites which had the assistance of a proctor. It appears that many of the smaller communities did comparatively well: e.g. Assiniboia 80.0, Biggar 74.0, Nipiwin 73.5, St. Walburg 80.0, Swift Current 73.3, Tisdale 83.0, Whitewood 76.0, Wynyard 80.3. With the exception of Watrous, none of these sites had the benefit of a local proctor. On the other hand, other non-proctored sites achieved only fair to low averages, e.g. Kindersley 61.8, Rosetown 62.3, Melville 59.3. An analysis of the final grades by sites with or without proctors showed no significant differences, although students at non-proctored sites tend to have higher grades. The three largest sites outside Saskatoon and the studio group achieved relatively low averages: Prince Albert 71.1 (X11) and 61.8 (X12), North Battleford 49.3, Yorkton 59.5, Saskatoon studio 62.9. Students in the independent study option (X01) which used the same Study Guide but had no access to the TV lectures achieved an average of 68.7.

Proctors and Tutors

Role and Responsibilities

The experience of distance teaching institutions such as the Open University in the United Kingdom and Athabasca University in Canada has demonstrated that strong student support is essential to high completion rates. Under the Open University model, the role of the regional tutor is to provide all assistance related to content, including marking of assignments. The tutorial relationship is essentially one-to-one, and communication between tutor and learner is conducted in writing and by telephone. In some courses, especially those requiring laboratory work, students gather at a regional university or technical institute for a two-week summer study session. In recent years, Athabasca University has added occasional face-to-face seminars to selected courses.

Under the University of Saskatchewan experimental model, the tutor is a local facilitator who is not expected to be a content expert, but is charged with the responsibility of assisting the students in finding the contexts for understanding the information presented by the television instructors, as well as assisting the instructors in monitoring the students' progress in integrating the new information. The facilitators prepare for each television session from the same content base as the students. On the evening of each session, the facilitator is expected to review the material in preparation for the instructor's televised presentation, manage the technical side of the viewing procedure, view the presentation with the students, lead a discussion of the topics identified by the instructor, and assist the students with the formulation of questions and comments for the on-air discussion with the instructor. The psychology facilitators are also required to invigilate the weekly mastery tests written by the students.

Facilitators were hired according to two criteria, relevant academic background and previous experience with adult learners. Because of Saskatchewan's small population and the project's intent to deliver the experimental classes to small rural communities, the Extension Division experienced difficulty in recruiting enough facilitators with a master degree, the level required to mark assignments. A compromise was achieved in hiring "proctors" who could lead the local discussions and invigilate tests, but would not mark assignments. A few individuals were hired as

English "tutors," with a dual responsibility of facilitating local discussion and marking assignments. In the case of sites with proctors, the assignments were sent to the Saskatoon campus to be marked by the instructor or a campus-based tutor. All of the proctors had at least one degree; three-quarters of them had some experience in the public school system or Regional Colleges as a teacher, counselor or administrator. Twelve of them had found out about the position from a Regional College staff member, 7 had responded to a newspaper ad placed by the Extension Division, 6 had been recruited by the University staff, and 6 had been alerted by their school principal, who had received the information from the Extension Division.

Both tutors and proctors, as well as the Regional College staff responsible for their designated STELLA sites, were invited to the campus before "show time" to participate in a one-day workshop. The purpose of the workshop was to orient them to the design of the project, their expected roles and functions, the administrative procedures, and the studio facilities where the lectures will be broadcast. They also met in small groups with the instructors, who reviewed the course content and shared ideas on how to stimulate student interaction at a distance. Because of the unexpected extension of the registration deadline for off-campus students to mid-September, only one-third of the proctors and tutors who worked on the project actually came to the orientation workshop. Two-thirds of the facilitators were not appointed until after the student enrolment at their respective communities had reached the minimum number required for hiring a proctor.

A survey of the facilitators the end of the first term indicated that most of them felt that their roles and functions had evolved as they had expected. Some proctors who did not have a chance to attend the orientation workshop in mid-August and received only written instructions indicated some confusion about their roles and functions. A few proctors who did not attend the workshop but were briefed by Regional College staff who did attend indicated that the College staff's understanding of the situation facilitated their own understanding of the expected role and responsibilities. Many of the proctors and tutors, especially those in Psychology 110.6, stated that they did not expect to spend so much time in preparing for the course. The proctors who were appointed later in the term were disadvantaged in that they had less time to read the materials and some actually did not receive the written orientation package until after the classes at their local sites had started.

Positive and Negative Experiences

The proctors and tutors were asked to describe the positive and/or negative experiences they had encountered. Most of the proctors and tutors expressed satisfaction in working with students who are enthusiastic about what they are doing. Without exception, proctors and tutors found adult, part-time students to be much more satisfying to work with than young high school graduates. The adult students tend to be more motivated, more willing to participate in discussions, and more disciplined in preparing for the televised lectures. On the other hand, some young full-time students have been observed to be equally keen and willing to participate. The proctors' perceptions are supported by an analysis of the students' final grades; mature students in their 30s and 40s performed significantly better than students in their 20s or younger in all three courses. There is also more variance in performance within the younger age groups (23 to 30; 22 and under). The following are examples of the proctors' comments:

"The students taking the course are very success oriented. I have worked with four of the six as a professional teacher. (Five of them are teachers). The class always does its readings, everyone does well in the evaluative process of the university and every one participates readily in the discussions." (History proctor, St. Walburg)

"One of the positive experiences I've had is working with adults who are very enthusiastic about what they are doing. The students enjoy the lectures, which make in-class discussions highly stimulating." (English proctor, Rosetown)

"With two notable exceptions, this entire class remains very 'high schoolish'.....I was not prepared for students' unwillingness to participate but I believe that's in part because I had forgotten how basically immature I was at the same age." (History proctor, Yorkton)

Other positive experiences include helping the students to learn, being exposed to excellent professors who are well-organized and stimulating in their presentations. A few proctors commented that the lecturers' enthusiasm had influenced their own desires to renew their own exploration of the subject matter. The visits by Professor Vandonselaar to some sites were perceived to be highlights by both the proctors and the

students. Other proctors have suggested that visits by the instructors will likely enhance student and local staff morale.

Negative experiences that were reported are related mostly to technical and administrative problems. Some proctors experienced difficulty with the reception and taping of the lectures and felt they should have received more support from the technical and administrative personnel. A few proctors located at sites with late admissions had to scramble to assist the students who had not yet received materials to read. Many psychology proctors were initially confused by the mastery test procedure, and bore the brunt of the students' frustration over study guide items and test items that were inappropriate. Some of these items had to be omitted or revised because they were based on the previous edition of the text book.

The campus-based tutors who functioned as markers for the English and History courses were frustrated with their inability to give more in-depth feedback to the students about their assignments. The History course adopted a centralized marking system whereby all assignments were sent to the campus to be marked by two tutors. These tutors had office hours during which students could call collect for feedback and counseling. Both History tutors expressed disappointment that they received few calls; they also observed that the students who performed well called but the weaker students did not. While it was the intention of the English course to adopt a decentralized marking system, the lack of qualified regional markers resulted in over half of the students sending their assignments to the Saskatoon campus. Unlike the History tutors, the English tutors did not have regular office hours and relied solely on written comments to give feedback to the students. The Psychology tutors' function was to provide feedback about the students' performance in the mastery tests, but they found themselves spending much time clarifying the content, especially the topics on physiology.

Suggestions for Enhancing the Courses

The tutors and proctors were invited to make suggestions about how the courses could be enhanced to make them more meaningful for the students. The History and Psychology proctors pointed out that some students feel overwhelmed by the amount of material that is covered within each session. In the former case, the situation is exacerbated by the fast pace of the lectures. In the latter case, students spend many

hours per week going thorough the study guide and mastery test items in addition to viewing the televised lectures and preparing essay assignments. Without proposing any specific strategies, the proctors wondered if something could be done to alleviate the workload.

Some English proctors felt uneasy about not knowing what aspects of literature Professor Marken intended to focus on in each lecture. Although the course guide specifies the topics to be covered each week, Professor Marken's teaching style is so spontaneous that the proctors felt no more prepared than the students. This created some difficulty during the discussion sessions when the students wanted the proctor to clarify or interpret the content rather than to lead a discussion of the contexts for understanding the information. Because they did not function as markers, many English and History proctors felt they had no mechanism to find out how well the students were doing in their written assignments and thereby attempt to assist them. It was suggested that proctors should collect and return all assignments. This would help them to feel more involved in the learning process and allow them to identify the weaker students who may need help. This suggestion was supported by the senior History tutor who felt the proctors "can serve very well in the capacity of trouble-shooters." He also suggested that students should be given a choice of topics for their essay assignments. This should help to alleviate the tedium of marking 60 or more essays on the same topic and allow the students to explore an issue that really interests them. One campus-based English tutor suggested that optional weekend sessions can be held for students to discuss academic problems related to assignments and exams.

Proctors and tutors in all three courses suggested that the instructors should try to visit the local sites. The communities which had received visits by the Psychology instructor felt that they were very worthwhile. They also suggested that a more flexible system be set up to allow students to view the back-up tapes. At the present, access to the tapes is dependent on the office hours of the local Regional College or SIAST office, where the tapes are housed. As mentioned in the previous chapter, students use the back-up tapes to review the content when they have missed a lecture because of illness or work/family responsibilities.

Contribution of Proctors to the Learning Process

A major responsibility of the proctors is to encourage the students to go beyond the passive receiving of information and explore contexts for understanding and integrating the information. This function is exercised through their leadership in the local discussion groups. Feedback from the students indicate that many of the proctors have succeeded in this function. In addition, they have assisted the students in understanding the course and assignment expectations, clarifying the lectures, and calling in questions to the studio. Some proctors appeared to be less successful than others for a variety of reasons: a few had large groups of students with different levels of academic readiness and motivation, some were unsure of the course procedures, some Psychology proctors were so busy coping with the mastery tests they did not have time to focus on discussions.

The students' ratings of a number of course components were correlated with sites with proctors and those without proctors. The course variables included: understanding of course expectations, rating of the course guide, rating of the TV presentations, perceived difficulty of the course, overall rating of the course, and comparison with other courses. A t-test showed that there are some significant differences within the English and History courses, but none within the Psychology course.

Within the English course, students at sites with a proctor tend to rate the TV lectures more highly ($p<0.02$), give the course a higher overall rating ($p<0.01$) and perceive the course to be less difficult ($p<0.03$) than those students at sites without a proctor (see Table 7a). Likewise, within the History course, students with the assistance of a proctor tend to give the course a higher overall rating ($p<0.03$) and perceive it to be less difficult ($p<0.01$). Like the English students, History students at proctored sites gave a higher mean rating to the TV presentations than students at non-proctored sites, but the difference is non-significant (see Table 7b). Because of the interpretive nature of the English 110 lectures, it is likely that the students put a higher value on the proctor's ability to help them understand and apply the the content. Different interpretations lead to different perspectives, all of which could affect the student's performance in the essay assignments.

Within the Psychology course, students at sites with proctors tend to indicate greater understanding of the course expectations, give higher ratings to the study guide, the TV guide and the mastery tests, and perceive the course to be less difficult. However, their ratings are not significantly higher than those of students at non-proctored sites (see Table 7c). Students without a proctor tend to give higher overall ratings to the course and also higher ratings to the TV presentations. These students also tend to have higher final grades, but the difference is not significant.

Comments by the students suggest one possible explanation for the higher ratings of the non-proctored group. Students at non-proctored sites complete the mastery tests on their own and call a tutor as soon as they are ready; immediate feedback is possible in this case. In contrast, students at proctored sites are required to write their mastery tests under the supervision of their proctors, then go home and call a tutor to have their responses reviewed. In some instances, the students spend the discussion break getting ready for their mastery tests instead of reflecting on the discussion topics, which are not included in the mid-term or final exams. This procedure was established by Professor Clark to deter cheating, but frustration with the logistics of the tests may have negatively affected the students' overall rating of the course and their rating of the TV presentations.

Overall, it appears that the students' successful performance in the televised courses is related more to their individual characteristics than the presence of a proctor or tutor. However, in most cases, the proctors and tutors have succeeded in facilitating the students' understanding of the course expectations and their exploration of various contexts and issues, although some students are more motivated than others in participating in the latter. Students at non-proctored sites have attested to the difficulty of starting and maintaining a discussion on their own. In the earlier part of the year, the proctors also served as models in conducting a conversation with the TV instructor. Some proctors have committed much more time than they expected in assisting the students, but most seem to have derived personal satisfaction from the experience.

Discussion and Recommendations

Summary of the Context of the Study

In the fall of 1987, the Division of Extension and Community Relations decided to invest in an experiment to deliver two introductory courses, English 110.6 (Literature and Composition) and History 112.6 (Historic Foundations of Modern Civilization) to 13 sites in the province via satellite television. In September 1988, Psychology 110.6 (General Psychology) was added and the number of sites was increased to 25. In all three cases, satellite television, the telephone, and on-site facilitators were used to bridge the distance between the campus-based instructors and the off-campus students. Students were expected to prepare for the televised lectures by reading and reflecting on specific topics identified in specially prepared course guides. The local facilitators (called proctors or tutors according to their functions) were charged with the responsibility of leading a discussion of the lecture content, as well as assisting the instructors in monitoring the students' progress in integrating the new information.

The 1987-88 pilot year included courses taught by Professor Ron Marken of the English department and Professor Michael Hayden of the History department. An evaluation of the pilot courses showed that they were received very positively by the students and the communities involved. Both English 110.6 and History 112.6 were offered again in 1988-89 with enrollments of 237 and 131 respectively. The weekly format consisted of a 15 minute orientation and review, a 60 minute live television presentation, a 30 minute off-air discussion led by the local facilitators, a 30 minute on-air discussion with the instructor, and a 15 minute wrap-up. Whereas Professor Marken's lectures were done "live" as in the pilot year, Professor Hayden's lectures were edited and transmitted to the receiving sites via satellite. Professor Hayden conducted a "live" interactive discussion with the students following the local discussion period.

In 1988-89, Professors Art Clark and Ko Vandonselaar offered Psychology 110.6 to 231 students using a combination of a print-based study guide and a series of 40 minute televised lectures. The 20-unit study guide followed a mastery learning approach which required the students to demonstrate that they have understood the material in the previous unit before they can go on to the next. Feedback about the mastery tests were given by local or campus-based tutors, who could be reached via toll-free telephone lines at selected hours seven days a week. The students were accountable

for all the content in the study guide when they wrote their mid-term and final exams. The lectures were intended to give the students additional examples and illustrations which surround some of the controversial issues in the field of psychology. Although four assignments were based on the lecture content, this content was not included in the exams.

The delivery of the experimental courses was facilitated by the cooperation of the Saskatchewan Regional Colleges and SIAST branch campuses. These agencies provided the television viewing facilities and the personnel to advertise the courses and manage the technical resources. The College staff also acted as troubleshooters in identifying local problems, whether human, logistical or technical. Problems were reported to the Division's Office of Part-Time Degree Studies, which provided the administrative infrastructure for the production and distribution of the print and video materials, the maintenance of a record system, and the hiring of local facilitators.

The production and transmission of the lectures were made possible by the technical support of the Division of Audio Visual Services, which has spearheaded a series of experiments with satellite television since 1981. The technical side of the operation was coordinated by STELLA (Saskatchewan Tele-Learning Association Inc.), a consortium of satellite users in Saskatchewan. English 110.6 and History 112.6 were delivered to 13 sites in 1987-88, including Prince Albert, Yorkton, North Battleford, Meadow Lake, Swift Current, Estevan, Weyburn, Tisdale, La Ronge, Moose Jaw, Kndersley, Lloydminster, and Saskatoon. In 1988-89, the STELLA network added Hudson Bay, Wynyard, Rosetown, Maple Creek, Assiniboia, Whitewood, Buffalo Narrows, Creighton, St. Walburg, Nipawin, Melfort, Unity, Biggar, Watrous, Davidson, Canora, Indian Head and Shaunavon.

An evaluation of the three televised courses was conducted using a mailed questionnaire. The questionnaires attempted to investigate the students' perception of a number of variables associated with the teaching/learning process, such as the importance of the TV lectures and the reading assignments in helping the students learn the content. The Registrar's office provided some demographic statistics which were correlated with the students' final grades. Both the students and their proctors and tutors were asked to make some suggestions about how the courses could be enhanced to make them more meaningful experiences. The proctors and tutors were also invited to comment on some of their positive and/or negative experiences.

Discussion of the Results

The results of the evaluation point to certain strengths and limitations of the televised courses; some of these had been identified in the evaluation of English 110 and History 112 during the pilot year (Wong, 1988).

Strengths

The televised courses have increased access to university education in rural Saskatchewan. This is appreciated by many students who cannot take attend university in Saskatoon:

> *"This is the first university class I have ever taken and it was a very positive experience. I liked having the support of a classroom setting, and having a professor we could contact if we were having trouble. I don't think I could have done this class by correspondence. This class has encouraged me to take another class in the fall through the STELLA program."*
> *(student in Nipiwin)*

> *"This class was excellent for someone like me. I have children to look after and a part-time job. I look forward to taking classes like this in the future."*
> *(student in Watrous)*

It appears that this mode of delivery has the potential to provide a viable alternative to on-campus university study for both young rural people and part-time adult students who have job and family responsibilities. In the former case, it would allow young people to experience university courses in their home communities and give them time to decide whether full-time attendance is the right choice for them. In the latter case, the courses are convenient for many adult students who can now take university courses right in their own communities or travel just a short distance to a STELLA receiving site.

The TV lecturers are excellent teachers and are credited by the students to be a major asset in this delivery mode. Researchers in distance education have found that distance learners differ from face-to-face learners in that they feel more isolated and experience lower levels of confidence (Cropley & Kahl, 1983).

Distance learners under the correspondence delivery mode are not able to talk to other learners, although in most cases they can contact their instructor via telephone. Under this televised mode, interactive television allows the students to hear and see their instructor, who not only introduces them to new information in an interesting and systematic manner, but encourages them and provides them with a link to other learners in the province. The sense of isolation is further alleviated by the availability of discussion groups led by proctors, who help the students explore different contexts for understanding the lecture content and frame questions for the on-air discussion with the instructor.

The students are given clear instructions as to what to expect from the course by the instructors, the course guide, and the local proctors. Distance learners have been found to report and value a higher level of organization and self-discipline than face-to-face learners (Kahl & Cropley, 1986). This need for organization is met through the highly structured lectures and the weekly readings identified in the course guides. Many students also commented positively about the helpfulness of the proctors in clarifying course expectations. The self-discipline of older, more experienced distance learners may have contributed to their comparatively higher grades. In all three courses, students who were in their 30s and 40s were found to have achieved significantly higher grades than those students who were in their 20s and younger. Feedback from the campus-based tutors indicate that the calls for assistance usually come from articulate, mature students who are already performing well in the course. It appears that younger, inexperienced students may need more assistance and encouragement in learning how to study effectively.

Limitations

Students in all three courses felt that the feedback about their performance in the assignments could be improved. While some students expressed appreciation for the encouraging comments they received, many pointed out that they were not given directions on how to correct or improve their analysis and their writing. With the exception of three English sections, all the English and History students had to mail in their assignments to the Saskatoon campus for marking. Sometimes, the slow turnaround time resulted in the students receiving feedback only after their next assignment is due. Delayed feedback is also a limitation of the Psychology course. Under the mastery learning approach, the students have to achieve a criterion score of

80% on a unit before they could move on to the next unit. Only Prince Albert had qualified tutors to give feedback on-site. Students at proctored sites (a majority of the students) had to write their tests on-site, then go home to phone a campus-based tutor. Research in distance education has shown that delays in feedback can inhibit learning (Rekkedal, 1983), but the problem has not yet been addressed by many institutions. Although some existing technology (e.g. FAX machines, electronic mail) may help to alleviate the problem, the cost is too prohibitive or the logistics is too unwieldy for most institutions to adopt them on a large scale.

Some students, while expressing their appreciation of the interesting subject matter, also expressed concern about some inconsistencies which they found irritating and time consuming. Distance learners, many of whom are adults with job and family responsibilities, value systematic learning probably because they know their study time has to compete with other priorities. The students' need for predictability and organization may help to explain some of the frustration reported by the students when they came across inappropriate items in the Psychology study guide and when the English lecturer deviated from the stated schedule in the course guide.

Several sites experienced persistent problems with their reception of the televised lectures. These problems have been found to be related to human error, technical difficulties with the hardware, or environmental interferences. Because of the complex network of human resources and the vast geographical area that the STELLA system has to serve, it is often difficult to deal with technical problems quickly. Some of the students' negative impressions can be directly attributed to the fact that the technology of satellite television is not consistently reliable. In the long term, greater effort needs to be expended to manage the technology so that it does not negatively affect the learning process.

In spite of the overall positive reaction to the televised courses, there were some students stated they felt they can learn better with a face-to-face instructor. Because of the limited television time available to the courses, some of the lectures have been delivered at a very fast pace, an obstacle for those students who are inexperienced in taking lecture notes. Students in all three courses need to do a large amount of reading on a regular basis. Those who do not or cannot keep up will derive less meaning and satisfaction from the televised lectures. Many students have expressed concern about the vast array of terminology in the Psychology study guide. While it was the intention

of the study guide to help the students learn this terminology in manageable units, the "marriage" of a behaviorist-oriented study guide to a humanist-oriented series of lectures has created some confusion and a very heavy workload for many students. This may partially explain why many Psychology students reported that they have learned a lot but did not enjoy the process.

Because the tuition revenue from a large enrollment was needed to pay for the development and operation of the televised courses, the offering of these three courses was restricted to the televised mode at all the participating sites. This in effect limited the students' choice of class times and created some scheduling problems for those who were attempting to take up full-time study. With the Saskatchewan government's recent announcement of financial support for distance education, perhaps the University can afford to allot more on-air time to the lectures as well as offer a face-to-face-option at the high enrollment centres. The latter will serve the needs of the students who prefer to learn from an on-site instructor and those who experience difficulty learning independently at a distance. A third option would be to pre-produce the lectures and distribute them as videocassettes, which could be viewed at flexible times by students in small groups facilitated by a proctor. Interactive discussions with the instructor could still be scheduled at designated times on a province-wide or regional basis.

Recommendations

1. Enhance the dissemination of the course content by:

   a/ increasing the time devoted to the televised lectures so that the content is presented at a more relaxed pace;

   b/ making the back-up tapes available to the students at a more flexible schedule;

   c/ giving advance notice to the proctors about the lecture content and discussion questions so that they can better prepare themselves for assisting the students;

   d/ providing students with access to their campus-based markers via toll-free telephone and/or optional weekend sessions.

2. Enhance the proctors' contribution to the learning process by:

a/ providing them with a manual which identifies their roles and responsibilities, introduces them to administrative procedures, and provides suggested strategies for facilitating discussion groups;

b/ continuing regular tele-conferences between the instructors and the proctors/tutors;

c/ collecting and returning assignments through the proctors so that they can identify and assist the students who may need help;

d/ orienting them to the VCR equipment so that they can respond to emergencies and alert the technical personnel about problems.

3. Enhance the discussion at the learning sites by:

a/ providing each site with more "user friendly" telephone equipment;

b/ providing students at non-proctored sites with access to the discussion at the studio or other sites.

4. Enhance the delivery of Psychology 110.6 by:

a/ revising the study guide and mastery tests;

b/ upgrading the proctors so that they can score the mastery tests and give immediate feedback on-site;

c/ re-organizing and re-taping selected lectures so that the series achieves a balance between lectures which clarify and expand on the text material and lectures which encourage students to explore controversial issues.

5. Enhance the students' feeling of affiliation with the University by:

a/ providing them with a video which introduces them to the studio facilities where the lectures are produced and the personnel who contribute to the student support system;

b/ providing them with an opportunity to meet with the television instructors in their home communities and to meet with their tutors/markers at optional weekend sessions.

APPENDIX A

Tables

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TABLE 1a
TV ENGLISH 110.6
DEMOGRAPHIC CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Sex		
Male	30	34.9
Female	56	65.1
Total	86	100.0
Marital Status		
Single	59	68.6
Married	27	31.4
Total	86	100.0
Age		
22 and under	44	51.2
23 to 30	15	17.4
31 to 40	15	17.4
41 to 50	12	14.0
Total	86	100.0
Citizenship		
Canadian	86	100.0
Total	86	100.0
Student Status		
Full-time (18 or more credits)	48	54.5
Part-time	40	45.5
Total	88	100.0
Work Outside Home		
Full-time employment	23	25.6
Part-time employment	40	44.4
No employment	27	30.0
Total	90	100.0

TABLE 1b
TV HISTORY 112.6
DEMOGRAPHIC CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Sex		
Male	14	23.0
Female	47	77.0
Total	61	100.0
Marital Status		
Single	29	47.5
Married	32	52.5
Total	61	100.0
Age		
22 and under	19	31.1
23 to 30	14	23.0
31 to 40	16	26.2
41 to 50	10	16.4
Over 50	2	3.3
Total	61	100.0
Citizenship		
Canadian	60	100.0
Total	60	100.0
Student Status		
Full-time (18 or more credits)	22	37.9
Part-time	36	62.1
Total	58	100.0
Work Outside Home		
Full-time employment	23	37.1
Part-time employment	28	45.2
No employment	11	17.7
Total	62	100.0

TABLE 1c
TV PSYCHOLOGY 110.6
DEMOGRAPHIC CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Sex		
Male	26	25.7
Female	75	74.3
Total	101	100.0
Marital Status		
Single	49	48.5
Married	52	51.5
Total	101	100.0
Age		
22 and under	38	38.0
23 to 30	23	23.0
31 to 40	21	21.0
41 to 50	15	15.0
Over 50	3	3.0
Total	100	100.0
Citizenship		
Canadian	101	100.0
Total	101	100.0
Student Status		
Full-time (18 or more credits)	44	41.1
Part-time	63	58.9
Total	107	100.0
Work Outside Home		
Full-time employment	37	33.6
Part-time employment	36	32.7
No employment	37	33.6
Total	110	100.0
Distance Travelled to Viewing Site		
Over 30 km	19	16.8
21 to 30 km	3	2.7
11 to 20 km	10	8.8
10 km and under	81	71.7
Total	113	100.0

TABLE 2a
TV ENGLISH 110.6
EDUCATIONAL CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Matriculation Year		
Previous year	33	44.6
2 to 5 years ago	16	21.6
6 to 10 years ago	2	2.7
Over 10 years ago	23	31.1
Total	74	100.0
Matriculation Province		
Saskatchewan	76	93.8
Other Canadian province	2	2.5
Other country	1	1.2
None	2	2.5
Total	81	100.0
Last Admission Year		
Before 1987	1	1.3
1987	10	13.2
1988	65	85.5
Total	76	100.0
Admission Status		
Fully admitted	58	63.0
Special admission	24	26.1
No record	10	10.9
Total	92	100.0
Year		
First	64	98.5
Second	1	1.5
Total	65	100.0
College		
Unclassified	40	47.1
Arts and Science	44	51.8
Other	1	1.2
Total	85	100.0
Credits Enrolled In		
6	24	27.9
12	16	18.6
15	1	1.2
18	12	14.0
21	2	2.3
24	8	9.3
30	23	26.7
Total	86	100.0

TABLE 2b
TV HISTORY 112.6
EDUCATIONAL CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Matriculation Year		
Previous Year	14	26.4
2 to 5 years ago	8	15.1
6 to 10 years ago	6	11.3
Over 10 years ago	25	47.2
Total	53	100.0
Matriculation Province		
Saskatchewan	55	96.5
Other Country	2	3.5
Total	57	100.0
Last Admission Year		
Before 1987	2	5.6
1987	9	25.0
1988	25	69.4
Total	63	100.0
Admission Status		
Fully admitted	30	47.6
Special admission	31	49.2
No record	2	3.3
Total	63	100.0
Year		
First	25	96.2
Second	1	3.8
Total	26	100.0
College		
Unclassified	44	72.1
Arts and Science	16	26.2
Other	1	1.6
Total	61	100.0
Credits Enrolled In		
6	25	41.0
9	3	4.9
12	13	21.3
18	7	11.5
24	1	1.6
30	12	19.7
Total	61	100.0

TABLE 2c
TV PSYCHOLOGY 110.6
EDUCATIONAL CHARACTERISTICS OF OFF-CAMPUS STUDENTS

	N	Percent
Matriculation Year		
Previous year	21	25.9
2 to 5 years ago	25	30.9
6 to 10 years ago	8	9.9
Over 10 years ago	27	33.3
Total	81	100.0
Matriculation Province		
Saskatchewan	85	90.4
Other Canadian Province	5	5.3
None	4	4.3
Total	94	100.0
Last Admission Year		
Before 1987	2	2.2
1987	12	13.2
1988	77	84.6
Total	91	100.0
Admission Status		
Fully admitted	68	58.1
Special admission	36	30.8
Other	13	11.1
Total	117	100.0
Year		
First	76	97.4
Second	2	2.6
Total	78	100.0
College		
Unclassified	61	60.4
Arts and Science	38	37.6
Other	2	2.0
Total	101	100.0
Credits Enrolled In		
6	38	37.6
12	20	19.8
18	10	9.9
24	14	13.9
30	19	18.8
Total	101	100.0

TABLE 3a
TV ENGLISH 110.6
OFF-CAMPUS STUDENTS' RATING OF VARIABLES RELATED TO THE TEACHING/LEARNING PROCESS

	N	MEAN	MODE	SD
Helpfulness of Course Guide	91	3.56	4.00	0.89
Helpfulness of On-Site Proctor	79	3.65	4.00	1.08
Helpfulness of TV Presentations	90	4.27	4.00	0.73
Quality of TV picture/sound	91	3.59	4.00	1.05
Quality of Classroom	91	3.85	4.00	0.80
Helpfulness of Scholes Text	91	3.75	4.00	0.81
Helpfulness of marker's written comments	91	3.02	3.00	0.87
Examinations' Suitability to Course Content	88	3.99	4.00	0.77
Difficulty of Course	89	2.58	3.00	0.80
Overall rating of course	89	3.79	4.00	0.92
Comparison with other "regular" university courses	61	3.48	4.00	1.06

TABLE 3b
TV HISTORY 112.6
OFF-CAMPUS STUDENTS' RATING OF VARIABLES RELATED
TO THE TEACHING/LEARNING PROCESS

	N	MEAN	MODE	SD
Helpfulness of Course Guide	63	4.06	4.00	0.72
Helpfulness of On-Site Proctor	52	3.25	4.00	0.97
Helpfulness of TV Presentations	63	4.21	4.00	0.79
Quality of TV picture/sound	62	3.39	3.00	0.95
Quality of Classroom	62	3.65	3.00	0.87
Helpfulness of Text Book(s)				
McKay text	63	4.25	4.00	0.72
Perry text	61	3.46	4.00	1.18
Essay texts	60	3.57	4.00	0.77
Helpfulness of marker's written comments	61	2.95	3.00	0.90
Examinations' Suitability to Course Content	62	4.10	4.00	0.76
Difficulty of Course	62	2.27	2.00	0.66
Overall rating of course	63	3.65	4.00	0.83
Comparison with other "regular" university courses	48	3.42	3.00	0.79

TABLE 3c
TV PSYCHOLOGY 110.6
OFF-CAMPUS STUDENTS' RATING OF VARIABLES RELATED
TO THE TEACHING/LEARNING PROCESS

	N	MEAN	MODE	SD
Helpfulness of Course Guide	116	3.61	3.00	0.87
Helpfulness of On-Site Proctor	91	3.45	4.00	1.01
Helpfulness of Study Guide	116	3.95	4.00	0.93
Helpfulness of Mastery Tests	116	3.40	3.00	1.08
Helpfulness of Text Book	115	4.02	4.00	0.71
Helpfulness of Tutors	116	3.36	3.00	1.02
Helpfulness of TV Guide	116	3.41	3.00	0.86
Helpfulness of TV Presentations	116	3.11	3.00	1.00
Frequency of Contact with TV lecturer	117	1.62	1.00	1.18
Weighting of Mastery Tests Long Assignments	114	3.42	4.00	1.00
Difficulty of Course	116	2.21	2.00	0.76
Overall Rating of Course	116	3.24	3.00	0.86
Mid-term Exam's Suitability to Course Content	114	3.64	4.00	0.95
Quality of TV picture/sound	116	3.94	5.00	1.00
Quality of Classroom	116	3.88	4.00	0.92

TABLE 4a
TV ENGLISH 110.6
FINAL GRADE STATUS OF STUDENTS

	N	Percent
Pass (50% and over)	185	70.3
Failure (< 50%)	12	4.6
Absent (ABS)	25	9.5
Incomplete-Failure (INF)	1	0.4
Withdrawal (W)	34	12.9
Withdrawal-Failure (WF)	6	2.3
TOTAL	263	100.0

TABLE 4b
TV HISTORY 110.6
FINAL GRADE STATUS OF STUDENTS

	N	Percent
Pass (50% and over)	89	67.4
Failure (< 50%)	8	6.1
Absent (ABS)	15	11.4
Incomplete-Failure (INF)	0	0.0
Withdrawal (W)	18	13.6
Withdrawal-Failure (WF)	2	1.5
TOTAL	132	100.0

TABLE 4c
TV PSYCHOLOGY 110.6
FINAL GRADE STATUS OF STUDENTS

	N	Percent
Pass (50% and over)	155	62.2
Failure (< 50%)	22	8.8
Absent (ABS)	32	12.9
Incomplete-Failure (INF)	0	0.0
Withdrawal (W)	36	14.5
Withdrawal-Failure (WF)	4	1.6
TOTAL	249	100.0

TABLE 5
TV PSYCHOLOGY 110.6
OFF-CAMPUS STUDENTS' RATINGS OF VARIABLES RELATED TO THE STUDENT SUPPORT SYSTEM

	N	MEAN	MODE	SD
Need to ask questions re course content	115	3.05	3.00	0.91
Primary source of information re course content	111		3.00 (on-site proctor)	
Need to ask questions re administrative matters	116	2.16	2.00	0.88
Primary source of information re administrative matters			3.00 (on-site proctor)	
Frequency of contacting Vandonselaar for counselling	116	1.21	1.00	0.60
Frequency of contacting Clark for counselling	115	1.02	1.00	0.16

TABLE 6
TV PSYCHOLOGY 110.6
USE OF BACK-UP TAPES

	N	Percent
YES	60	51.3
NO	56	47.9

REASONS FOR VIEWING BACK-UP TAPES

	N	Percent
Missed one or more lectures	33	58.9
Need to review content	7	12.5
Prepare for long assignment	14	25.0
Lecture pace too fast	2	3.6
Total	56	100.0

TABLE 7a
TV ENGLISH 110.6
RATING OF COURSE VARIABLES BY STUDENTS
WITH AND WITHOUT LOCAL PROCTOR

	N	MEAN	SD	t-test
Understanding of course expectations				
with proctor	52	3.63	0.86	non-sig.
without proctor	39	3.58	0.91	
Rating of course guide				
with proctor	52	3.56	0.87	non-sig.
without proctor	39	3.56	0.91	
Rating of TV presentations				
with proctor	51	4.43	0.58	significant
without proctor	39	4.05	0.86	$p < 0.02$
Difficulty of course				
with proctor	52	2.75	0.68	significant
without proctor	37	3.35	0.89	$p < 0.03$
Overall rating of course				
with proctor	52	4.00	0.84	significant
without proctor	37	3.49	0.96	$p < 0.01$
Comparison with other courses				
with proctor	34	3.59	1.05	non-sig.
without proctor	27	3.33	1.07	

TABLE 7b
TV HISTORY 112.6
RATING OF COURSE VARIABLES BY STUDENTS
WITH AND WITHOUT LOCAL PROCTOR

	N	MEAN	SD	t-test
Understanding of course expectations				
with proctor	39	3.85	0.78	non-sig.
without proctor	24	3.83	1.01	
Rating of course guide				
with proctor	39	4.15	0.63	non-sig.
without proctor	24	3.91	0.83	
Rating of TV presentations				
with proctor	39	4.26	0.82	non-sig.
without proctor	24	4.13	0.74	
Difficulty of course				
with proctor	38	2.44	0.69	significant
without proctor	24	2.00	0.51	$p < 0.01$
Overall rating of course				
with proctor	39	3.82	0.82	significant
without proctor	24	3.38	0.77	$p < 0.03$
Comparison with other courses				
with proctor	29	3.38	0.93	non-sig.
without proctor	19	3.47	0.61	

TABLE 7c
TV PSYCHOLOGY 110.6
RATING OF COURSE VARIABLES BY STUDENTS
WITH AND WITHOUT LOCAL PROCTOR

	N	MEAN	SD	t-test
Understanding of course expectations				
with proctor	67	3.07	1.02	non-sig.
without proctor	50	2.88	1.00	
Rating of course guide				
with proctor	67	3.61	0.97	non-sig.
without proctor	49	3.61	0.73	
Rating of TV guide				
with proctor	67	3.49	0.91	non-sig.
without proctor	49	3.31	0.77	
Rating of study guide				
with proctor	67	4.01	0.91	non-sig.
without proctor	49	3.86	0.96	
Rating of mastery tests				
with proctor	67	3.49	1.08	non-sig.
without proctor	49	3.27	1.08	
Rating of TV presentations				
with proctor	67	2.97	0.95	non-sig.
without proctor	49	3.31	1.04	
Difficulty of course				
with proctor	67	2.25	0.77	non-sig.
without proctor	49	2.14	0.79	
Overall rating of course				
with proctor	66	3.15	0.86	non-sig.
without proctor	50	3.36	0.85	
Comparison with other courses				
with proctor	36	2.81	1.12	non-sig.
without proctor	27	2.81	1.04	

TABLE 8a
TV ENGLISH 110.6
FINAL GRADE BY STUDENT CHARACTERISTICS

	N	MEAN	SD	t-test
Sex				
male	28	65.18	9.75	non-sig.
female	55	65.69	9.08	
Age group				
22 and under	42	65.55	9.77	significant
23 to 30	14	60.07	10.08	$p < 0.03$
31 to 40	15	66.47	5.54	
41 and over	12	70.58	7.47	
Marital status				
married	27	68.00	6.73	significant
single	56	64.32	10.09	$p < 0.05$
Working				
full-time	23	65.39	8.41	non-sig.
part-time	34	65.12	8.92	
not working	24	66.13	11.07	
Admission status				
full admission	55	65.67	9.86	non-sig.
no record	10	66.50	6.90	
special admission	18	64.50	8.79	
College status				
unclassified	39	64.41	9.57	non-sig.
arts & science	42	66.14	9.01	
Student status				
full-time	41	65.78	10.20	non-sig.
part-time	48	64.89	8.66	
Assisted by proctor				
yes	51	65.59	9.68	non-sig.
no	32	65.41	8.67	

TABLE 8b
TV HISTORY 112.6
FINAL GRADE BY STUDENT CHARACTERISTICS

	N	MEAN	SD	t-test
Sex				
male	14	64.07	13.92	significant
female	47	72.02	8.75	$p < 0.01$
Age group				
22 and under	19	60.68	10.76	significant
23 to 30	14	71.43	8.24	$p < 0.00$
31 to 40	16	75.13	6.01	
41 and over	12	77.25	6.66	
Marital status				
married	32	75.50	5.67	significant
single	29	64.34	11.70	$p < 0.00$
Working				
full-time	23	73.56	8.69	non-sig.
part-time	26	68.73	11.76	
not working	11	67.09	10.77	
Admission status				
full admission	30	65.00	11.40	significant
no record	2	74.00	0.00	$p < 0.00$
special admission	29	75.31	6.96	
College status				
unclassified	44	72.68	10.41	significant
arts & science	16	63.19	8.16	$p < 0.01$
Student status				
full-time	20	63.50	7.86	significant
part-time	36	72.92	10.69	$p < 0.00$
Assisted by proctor				
yes	39	70.97	7.75	non-sig.
no	22	68.82	14.43	

TABLE 8c
TV PSYCHOLOGY 110.6
FINAL GRADE BY STUDENT CHARACTERISTICS

	N	MEAN	SD	t-test
Sex				
male	23	61.13	14.57	non-sig.
female	68	67.96	15.55	
Age group				
22 and under	31	57.93	15.47	significant
23 to 30	21	64.67	15.43	$p < 0.00$
31 to 40	21	73.10	10.92	
41 and over	17	73.41	13.06	
Marital status				
married	49	71.57	14.80	significant
single	42	60.00	14.08	$p < 0.00$
Working				
full-time	35	67.46	15.83	non-sig.
part-time	27	68.19	14.53	
not working	27	61.77	15.83	
Admission status				
full admission	59	64.03	16.05	significant
no record	12	64.08	14.65	$p < 0.04$
special admission	20	74.00	12.18	
College status				
unclassified	59	67.98	15.91	non-sig.
arts & science	30	62.63	14.05	
Student status				
full-time	31	61.23	14.39	significant
part-time	55	69.65	14.92	$p < 0.01$
Assisted by proctor				
yes	60	64.75	16.57	non-sig.
no	31	69.09	13.03	

TABLE 9
TV PSYCHOLOGY 110.6
FINAL GRADE AVERAGE BY SITE

Section #	Class Average	N	W	WF	ABS	Proctor/ No Proctor
10 studio	62.90	11	4	1	2	no
X01 independent studies	68.77	13	2	0	3	no
X02 La Ronge	-	-	1	0	1	no
X06 North Battleford	61.71	14	7	0	3	yes
X07 Meadow Lake	62.33	3	2	0	0	no
X08 North Battleford	49.33	9	2	1	6	yes
X09 St. Walburg	80.00	1	0	0	0	no
X10 Unity	65.00	1	0	0	0	no
X11 Prince Albert	71.05	20	4	0	1	yes
X12 Prince Albert	61.75	20	4	1	5	yes
X16 Tisdale	83.00	4	0	0	0	no
X17 Hudson Bay	64.25	4	0	0	0	no
X18 Melfort	69.33	3	1	0	0	no
X19 Nipawin	73.50	2	1	0	1	no

X21 Kindersley	61.75	16	2	0	3	yes
X22 Rosetown	62.25	4	1	0	1	yes
X23 Biggar	74.00	3	0	0	1	no
X26 Saskatoon	-	-	1	0	0	no
X31 Wynyard	80.33	3	1	0	0	no
X32 Davidson	53.33	3	0	0	1	no
X33 Watrous	81.50	6	1	0	0	yes
X36 Yorkton	59.50	20	0	0	1	yes
X37 Yorkton	48.50	2	0	0	0	yes
X38 Canora	70.00	1	2	0	1	no
X39 Melville	59.33	3	0	0	0	no
X41 Swift Current	73.25	4	0	0	1	yes
X42 Maple Creek	-	-	1	0	0	no
X57 Weyburn	-	-	0	1	0	no
X58 Assiniboia	80.00	1	0	0	0	no
X59 Whitewood	76.00	5	0	0	0	no
X60 Indian Head	62.00	1	0	0	1	no

APPENDIX B

Questionnaires

UNIVERSITY OF SASKATCHEWAN
Survey of Students in Televised ENGLISH 110.6
April, 1989

INSTRUCTIONS:

For each of the following items, please indicate your response by writing the appropriate number in the blank space provided to the right of the questions.

Example:

Did you find this course easy or difficult?

(1) very difficult	(2) somewhat difficult	(3) just right	(4) somewhat easy	(5) very easy	4

If you found the course somewhat easy, you would put a '4' in the blank to the right of the scale.

---

1. How clearly did you understand what was expected of you when the course began in September?

(1) not at all clearly	(2) not very clearly	(3) adequately	(4) quite clearly	(5) very clearly	_____

2. How would you rate the Course Guide in terms of how much it helped you understand what was expected of you in the course?

(1) of no help at all	(2) not very helpful	(3) somewhat helpful	(4) very helpful	(5) essential	_____

Comments: _____

_____

3. How would you rate the on-site proctor/tutor in terms of that person's role in helping you understand what was expected of you in the course? (Write N/A in the blank if you have no proctor/tutor.)

(1) of no help at all	(2) not very helpful	(3) somewhat helpful	(4) very helpful	(5) essential	_____

Comments: _____

_____

4. How would you rate the television presentations in terms of how much they helped you learn the content of the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

5. How would you rate the quality of the television picture and sound? (Write N/A in the blank if you were in the studio.)

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

6. How would you rate the classroom where you viewed the TV presentations and participated in the discussion? (Write N/A in the blank if you were in the studio.)

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

7. Were there occasions when you needed to view the back-up tapes?

(1)	(2)	
yes	no	_____

If YES, please state the reasons _____

_____

8. How would you rate *Elements of Literature* by Scholes et al in terms of how much it helped you learn the content of the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

9. How adequate were the marker's written comments about your assignments in terms of giving you feedback about your work?

(1)	(2)	(3)	(4)	(5)	
inadequate	not very adequate	adequate	more than adequate	superior	_____

Comments: _____

_____

10. How would you rate the examinations in this course in terms of their suitability to the content of the course?

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

11. Did you find this course easy or difficult?

(1)	(2)	(3)	(4)	(5)	
very difficult	somewhat difficult	just right	somewhat easy	very easy	_____

Comments: _____

_____

12. How would you rate this course overall?

(1)	(2)	(3)	(4)	(5)	
poor	fair	good	very good	excellent	_____

Comments: _____

_____

13. How would you compare this course with other university courses you have taken in regular classes? (If you've never taken a university class before, write N/A in the blank space.)

(1)	(2)	(3)	(4)	(5)	
much poorer	somewhat poorer	equivalent	somewhat better	much better	_____

Comments: _____

_____

14. Can you suggest ways in which this course could be enhanced to make it a more meaningful learning experience for you?

_____

_____

_____

_____

_____

_____

_____

_____

****

15. We'd like to know more about your situation:

Are you a full-time student (taking 18 credit units or more)?

yes ☐ no ☐

Are you working in addition to taking classes?

Yes, full-time ☐ yes, part-time ☐ no: ☐

****

Thank you for your co-operation

UNIVERSITY OF SASKATCHEWAN
Survey of Students in Televised HISTORY 112.6
April, 1989

INSTRUCTIONS:

For each of the following items, please indicate your response by writing the appropriate number in the blank space provided to the right of the questions.

Example:

Did you find this course easy or difficult?

(1)	(2)	(3)	(4)	(5)	
very difficult	somewhat difficult	just right	somewhat easy	very easy	4

If you found the course somewhat easy, you would put a '4' in the blank to the right of the scale.

---

1. How clearly did you understand what was expected of you when the course began in September?

(1)	(2)	(3)	(4)	(5)	
not at all clearly	not very clearly	adequately	quite clearly	very clearly	_____

2. How would you rate the Course Guide in terms of how much it helped you understand what was expected of you in the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

3. How would you rate the on-site proctor/tutor in terms of that person's role in helping you understand what was expected of you in the course? (Write N/A in the blank if you have no proctor/tutor.)

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

4. How would you rate the television presentations in terms of how much they helped you learn the content of the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

5. How would you rate the quality of the television picture and sound? (Write N/A in blank if you were in the studio.)

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

6. How would you rate the classroom where you viewed the TV presentations and participated in the discussion? (Write N/A in blank if you were in the studio.)

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____ _____

7. Were there occasions when you needed to view the back-up tapes?

(1)	(2)	
yes	no	_____

If YES, please state the reasons _____

_____

8. How would you rate *A History of Western Society* by McKay et al and *Sources of the Western Tradition* by Perry et al in terms of how much they helped you learn the content of the course?

A History of Western Society

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Sources of the Western Tradition

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

9. How would you rate the three books used as bases for the essay assignments (Machiavelli, Voltaire, Malthus)? If one was particularly good or poor, please comment.

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

10. How adequate were the marker's written comments about your assignments in terms of giving you feedback about your work?

(1)	(2)	(3)	(4)	(5)	
inadequate	not very adequate	adequate	more than adequate	superior	_____

Comments: _____

_____

11. How would you rate the examinations in this course in terms of their suitability to the content of the course?

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

12. Did you find this course easy or difficult?

(1)	(2)	(3)	(4)	(5)	
very difficult	somewhat difficult	just right	somewhat easy	very easy	_____

Comments: _____

_____

13. How would you rate this course overall?

(1)	(2)	(3)	(4)	(5)	
poor	fair	good	very good	excellent	_____

Comments: _____

_____

14. How would you compare this course with other university courses you have taken in regular classes? (If you've never taken a university class before, write N/A in the blank space.)

(1)	(2)	(3)	(4)	(5)	
much poorer	somewhat poorer	equivalent	somewhat better	much better	_____

Comments: _____

_____

15. Can you suggest ways in which this course could be enhanced to make it a more meaningful learning experience for you?

_____

_____

_____

_____

_____

_____

_____

****

16. We'd like to know more about your situation:

Are you a full-time student (taking 18 credit units or more)?

yes ☐ no ☐

Are you working in addition to taking classes?

Yes, full-time ☐ yes, part-time ☐ no: ☐

****

Thank you for your co-operation

UNIVERSITY OF SASKATCHEWAN
Survey of Students in Televised PSYCHOLOGY 110.6
January 1989

INSTRUCTIONS:

For each of the following items, please indicate your response by writing the appropriate number in the blank space provided to the right of the questions.

Example:

Did you find this course easy or difficult?

(1)	(2)	(3)	(4)	(5)	
very difficult	somewhat difficult	just right	somewhat easy	very easy	4

If you found the course somewhat easy, you would put a '4' in the blank to the right of the scale.

---

1. How clearly did you understand what was expected of you when the course began in September?

(1)	(2)	(3)	(4)	(5)	
not at all clearly	not very clearly	adequately	quite clearly	very clearly	_____

2. How would you rate the Course Guide and TV Guide in terms of how much they helped you understand what was expected of you in the course?

   A) Course Guide:

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

   B) TV Guide:

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

   Comments: _____

   _____

3. How often did you feel you needed to ask a question to get information or clarification about the *course content*? (whether or not you actually asked for it.)

(1)	(2)	(3)	(4)	(5)	
very rarely	rarely	occasionally	frequently	consistently	_____

Who was your primary source of information?

(1)	(2)	(3)	(4)	(5)	
Professor Vandonselaar	Professor Clark	on-site proctor/tutor	telephone tutor	other	_____

Comments: _____

_____

4. How often did you feel you needed to ask a question to get information or clarification about *administrative matters*?

(1)	(2)	(3)	(4)	(5)	
very rarely	rarely	occasionally	frequently	consistently	_____

Who was your primary source of information?

	(1)	(2)	(3)	(4)	(5)
Professor Vandonselaar	Professor Clark	on-site proctor/tutor	regional college staff	other	_____

Comments: _____

_____

5. How would you rate the Study Guide (20-unit syllabus) and Mastery Tests in terms of how much they helped you learn the content of the course?

A) Study Guide:

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

B) Mastery Tests:

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

6. How would you rate *An Introduction to Psychology* by Atkinson et al in terms of how much it helped you learn the content of the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

7. How would you rate the studio presentations in terms of how much they helped you discover meaningful contexts for studying Psychology?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

8. Were there occasions when you needed to view the back-up tapes?

(1)	(2)	
yes	no	_____

If YES, please state the reasons _____

_____

9. How would you rate the telephone tutors in terms of how much they helped you learn the content of the course?

(1)	(2)	(3)	(4)	(5)	
of no help at all	not very helpful	somewhat helpful	very helpful	essential	_____

Comments: _____

_____

10. How many times did you contact Professor Vandonselaar or Professor Clark during their telephone counselling office hours?

Dr. Vandonselaar:

(1)	(2)	(3)	(4)	(5)	
0	1	2 or 3	4 or 5	more than 5	_____

Dr. Clark

(1)	(2)	(3)	(4)	(5)	
0	1	2 or 3	4 or 5	more than 5	_____

Comments: _____

_____

11. How adequate were the marker's written comments about your Long Answer Assignments in terms of giving you feedback about your work?

(1)	(2)	(3)	(4)	(5)	
inadequate	not very adequate	adequate	more than adequate	superior	_____

Comments: _____

_____

12. How would you rate the mid-term examination in this course in terms of its suitability to the content of the course?

(1)	(2)	(3)	(4)	(5)	
very poor	poor	satisfactory	good	very good	_____

Comments: _____

_____

13. How would you rate the weighting of the Mastery Tests (15%) and the Long Answer Assignments (20%) in terms of their relative contribution to your final grade?

(1)	(2)	(3)	(4)	(5)	
not appropriate at all	not very appropriate	somewhat appropriate	appropriate	just right	_____

Comments: _____

_____

14. Did you find this course easy or difficult?

(1) very difficult	(2) somewhat difficult	(3) just right	(4) somewhat easy	(5) very easy	_____

Comments: _____

_____

15. How would you rate this course overall?

(1) poor	(2) fair	(3) good	(4) very good	(5) excellent	_____

Comments: _____

_____

16. How would you compare this course with other university courses you have taken in regular classes? (If you've never taken a university class before, write N/A in the blank space.)

(1) much poorer	(2) somewhat poorer	(3) equivalent	(4) somewhat better	(5) much better	_____

Comments: _____

_____

17. Can you suggest ways in which this course could be enhanced to make it a more meaningful learning experience for you?

_____

_____

_____

_____

_____

_____

****

18. We'd like to know more about your situation:

Are you a full-time student (taking 18 credits or more)?
yes ☐ no ☐

Are you working in addition to taking classes?
Yes, full-time ☐ yes, part-time ☐ no: ☐

****

Thank you for your co-operation